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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* SRINIVAS GUTTA

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Appeal 2008-3000  
Application 10/014,202  
Technology Center 3600

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Decided: January 15, 2009

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*Before:* WILLIAM F. PATE, III, LINDA E. HORNER and  
STEVEN D.A. MCCARTHY, *Administrative Patent Judges.*

PATE, III, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a rejection of claims 1 and 3-23.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 6(b) (2002).

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<sup>1</sup> We have not considered any Supplemental Examiner's Answers mailed after the issuance of an Appeal Docketing Notice.

The claims are directed to a system for recommending items to a target user, based at least in part on the selection history of a third party. Claim 1 is illustrative of the claimed subject matter and is reproduced below:

1. A computerized method performed by a data processor for recommending one or more available items to a target user, comprising the steps of:

obtaining a history of selecting one or more available items by at least one third party;

partitioning a third party selection history into a plurality of clusters, wherein each cluster contains items that are closer to the mean of the cluster than any other cluster from among the plurality of clusters,

modifying a target user's history of selecting said one or more available items with one or more third party clusters to produce a modified target user's history;

processing the modified target user's history to generate a target user profile, wherein the modified target user's history characterizes preferences of the target user as modified to reflect preferences of the third party;

generating a recommendation score for at least one of said available items based on said target user's profile; and

displaying the recommendation score to the target user.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Herz

US 5,758,257

March 26, 1998

The Examiner rejected claims 1 and 3-23 under 35 U.S.C. § 102(b) as being anticipated by Herz.

Appellant contends the Examiner erred in rejecting claims 1 and 3-23 under 35 U.S.C. § 102(b) as being anticipated by Herz.

## SUMMARY OF DECISION

We AFFIRM-IN-PART and ENTER NEW GROUNDS OF REJECTION PURSUANT TO OUR AUTHORITY UNDER 37 C.F.R. § 41.50(b).

## THRESHOLD ISSUE 1

Do claims 1 and 3-13 satisfy the requirements of 35 U.S.C. § 101?

## PRINCIPLES OF LAW REGARDING ISSUE 1

### *Statutory Subject Matter*

The law in the area of patent-eligible subject matter for process claims has recently been clarified by the Federal Circuit in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc). The en banc court in *Bilski* held that “the machine-or-transformation test, properly applied, is the governing test for determining patent eligibility of a process under § 101.” *Id.* at 956. The court in *Bilski* further held that “the ‘useful, concrete and tangible result’ inquiry is inadequate [to determine whether a claim is patent-eligible under § 101.]” *Id.* at 960.

The court explained the machine-or-transformation test as follows:

The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article. *See Benson*, 409 U.S. at 70, 93 S. Ct. 253. Certain considerations are applicable to analysis under either branch. First, as illustrated

by *Benson* and discussed below, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility. *See Benson*, 409 U.S. at 71-72, 93 S. Ct. 253. Second, the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. *See Flook*, 437 U.S. at 590, 98 S. Ct. 2522.

*Id.* at 961-62.

The court declined to decide under the machine implementation branch of the inquiry whether or when recitation of a computer suffices to tie a process claim to a particular machine. As to the transformation branch of the inquiry, however, the court explained that transformation of a particular article into a different state or thing “must be central to the purpose of the claimed process.” *Id.* As to the meaning of “article,” the court explained that chemical or physical transformation of physical objects or substances is patent-eligible under § 101. *Id.* The court also explained that transformation of data is sufficient to render a process patent-eligible if the data represents physical and tangible objects, i.e., transformation of such raw data into a particular visual depiction of a physical object on a display. *Id.* at 962. The court further noted that transformation of data is insufficient to render a process patent-eligible if the data does not specify any particular type or nature of data and does not specify how or where the data was obtained or what the data represented. *Id.* (citing *In re Abele*, 684 F.2d 902, 909 (CCPA 1982) (process claim of graphically displaying variances of data from average values is not patent-eligible) and *In re Meyer*, 688 F.2d 789, 792-93 (CCPA 1982) (process claim involving undefined “complex system” and indeterminate “factors” drawn from unspecified “testing” is not patent-eligible)).

### ANALYSIS REGARDING ISSUE 1

Claims 1 and 3-13 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Process claims 1 and 7 recite “[a] computerized method performed by a data processor.” Claim 1 additionally requires, “displaying the [calculated result] to [a] target user.” These are the only limitations which could arguably be construed to tie the claimed process to a particular machine under the first prong of the machine-or-transformation test. This is the exact issue that the court in *Bilski* declined to decide. *Bilski* at 961-62. The court did, however, provide some guidance when it explained that the use of a specific machine must impose meaningful limits on the claim’s scope to impart patent-eligibility. *Id.*

The recitation in the preamble of “[a] computerized method performed by a data processor” adds nothing more than a general purpose computer that is associated with the steps of the process in an unspecified manner. Such a field-of-use limitation is insufficient to render an otherwise ineligible process claim patent eligible. *Bilski*, 545 F.3d at 957, citing *Diehr*, 450 U.S. at 191-92 (noting that eligibility under § 101 “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.”). This recitation, therefore, fails to impose any meaningful limits on the claim’s scope.

Regarding claim 1, the step of “displaying” need not be performed by any particular structure. It may be accomplished simply by writing the resulting score on a piece of paper. A conclusion that such post-solution activity is sufficient to impart patentability to a claim involving the solving of a mathematical algorithm would exalt form over substance. This step is,

therefore, insufficient to impart patentability to a claim involving the solving of a mathematical algorithm.

The steps of process claims 1 and 7 also fail the second prong of the machine-or-transformation test because the data does not represent physical and tangible objects. Rather, the data represents information about user selection histories, an intangible.

### CONCLUSION OF LAW REGARDING ISSUE 1

For the above reasons, the process of claims 1 and 3-13 fail the machine-or-transformation test and are not patent-eligible under 35 U.S.C. § 101.

### ISSUE 2

Has Appellant established that the Examiner has erred in rejecting claims 1 and 3-23 under 35 U.S.C. § 102(b) as being anticipated by Herz?

### FINDINGS OF FACT REGARDING ISSUE 2

1. Herz discloses a computerized (col. 8, l. 20; col. 45, ll. 20-23) method performed by a data processor 906 for recommending one or more available items (e.g., video programs; col. 4, ll. 21-22) to a target user (e.g., new or existing “customers”), comprising the steps of obtaining a history of selecting one or more available items (col. 6, ll. 58-59; col. 37, ll. 64-67; col. 39, ll. 24-37) by at least one third party (e.g., “other individuals” or “different celebrities”; col. 49, ll. 1-4); partitioning a third party selection history into a plurality of clusters (col. 5, ll. 30-32; col. 38, ll. 9-12), wherein each cluster (e.g., customer  $i^{1-i,u-i}$ ) contains items

that are closer to the mean of the cluster than any other cluster from among the plurality of clusters (e.g., items associated with a particular mood or time).

2. Herz additionally discloses generating a recommendation score AC for at least one of said available items based on said target user's profile (col. 21); and displaying the recommendation score to the target user (col. 46, ll. 15-18).
3. Herz additionally discloses receiving a selection (e.g., via 918) from said user 916 of at least one of said clusters of similar items (e.g., another individual's profile) and modifying said user profile using said user selected clusters (col. 45, ll. 61-62).
4. Herz additionally discloses memory (908) and a processor (906) configured to perform the steps delineated in paragraphs 1-3 of this section.
5. The "another individual" or "celebrity" described in Herz falls within what Herz defines as a "customer" and is therefore presumed to possess all the attributes of "customers" as they are generally described in Herz. Customers may have multiple profiles, corresponding, for example, to moods, and when compiling a history of which program each viewer has watched (col. 37, ll. 64-67), the movies watched by a customer must be clustered into groups (col. 38 ll. 11-12). Thus from the viewing history of a customer, subsets of viewing histories corresponding to each mood of that customer are compiled.
6. Herz fails to disclose modifying a target user's history of selecting said one or more available items with one or more third party clusters to produce a modified target user's history; processing the modified target



user's history to generate a target user profile, wherein the modified target user's history characterizes preferences of the target user as modified to reflect preferences of the third party.

7. Herz fails to disclose updating a selection history of a user with items from the selected clusters and updating the user profile using the updated selection history.
8. Herz fails to disclose a processor configured to perform the steps delineated in paragraphs 6-7 of this section.
9. Herz fails to disclose a means for performing the functions delineated in paragraphs 6-7 of this section.
10. Herz fails to disclose an article of manufacture having computer readable code comprising the steps delineated in paragraphs 6-7 of this section.

## PRINCIPLES OF LAW REGARDING ISSUE 2

### *Anticipation*

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). “These elements must be arranged as in the claim under review, but this is not an ‘ipsissimis verbis’ test.” *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (quoting from *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, (Fed. Cir. 1984), and *Akzo N.V. v. United States Int’l Trade Comm’n*, 808 F.2d 1471, 1479 n.11 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987), respectively).

## ANALYSIS REGARDING ISSUE 2

Though we have determined that claims 1 and 3-13 are not patent-eligible under 35 U.S.C. § 101, for the sake of completeness the rejections of these claims under 35 U.S.C. § 102 is addressed below.

*The rejection of claims 7-9, 11-13, and 18-20 as being anticipated by Herz is affirmed.*

The Examiner has reasonably concluded that Herz discloses all features of claims 7 and 18 (Facts 1-4). Appellant argues that Herz fails to disclose the limitation requiring, “partitioning a third party selection history into a plurality of clusters.” Appellant contends that the term “clustering customer profiles” as it is employed by Herz differs from the “clustering” claimed by Appellant. (Brief 12-14). This argument is not relevant however, since the Examiner does not rely on the “clustering customer profiles” of Herz to meet the limitation in question. The Examiner instead relies upon the step of creating a plurality of customer profiles for each customer (col. 5, ll. 24-25, 30-32) and “clustering the movies watched” by a customer based on those profiles (col. 38, ll. 9-12) to meet that limitation (Answer p. 5).

Appellant argues that Herz does not mention partitioning the viewing history, whether belonging to another individual or to a celebrity, into sets of clusters. (Brief p. 14). This interpretation is in error. The Examiner relies on “another individual” or a “celebrity” to meet the claimed limitation of a “third party” (Fact 1). The “another individual” or “celebrity” falls within what Herz defines as a “customer” and is therefore presumed to possess all the attributes of “customers” as they are generally described in Herz. Customers may have multiple profiles, corresponding, for example, to

moods, and when compiling a history of which program each viewer has watched (col. 37, ll. 64-67) the movies watched by a customer must be clustered into groups (col. 38 ll. 11-12). Thus from the viewing history of a customer, subsets of viewing histories corresponding to each mood of that customer are compiled (Fact 5). While we acknowledge that the partitioning criteria for clustering items in the viewing history of Appellant's preferred embodiment is based on attributes of the item (i.e., genre) there is no preclusion for forming the clusters based on attributes of the viewer (i.e., the mood of the viewer when the item was viewed). The Examiner has reasonably construed Herz to meet the claim limitation requiring "partitioning a third party selection history" (Fact 1).

*The rejection of claims 1, 3-6, 10, 14-17, and 21-23 as being anticipated by Herz is reversed.*

To meet the limitations requiring "modifying<sup>2</sup> a target user's history of selecting said one or more available items with one or more third party clusters to produce a modified target user's history; processing the modified target user's history to generate a target user profile, wherein the modified target user's history characterizes preferences of the target user as modified to reflect preferences of the third party," the Examiner cites to column 49, lines 1-20 of Herz (Answer p. 4). The cited section does not suffice to meet these limitations. While Herz may reasonably be relied on to disclose selection of a third party profile associated with a clustered history and

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<sup>2</sup> With respect to claim 14, it is noted that the phrases "to... partitioning"; "to...selecting"; etc... lack grammatical agreement. With respect to these limitations, however, claim 14 is understood to cover substantially the same scope as claim 1.

modifying a target user's profile based on that history, as is required by Claims 7 and 18, Claims 1, 10, 14, 17, and 21-23 additionally require a modification of the target user's history. If the Examiner cites a particular feature of a reference as equivalent to a claim element, that same feature must be employed to meet subsequent limitations further defining that element in order to support a rejection under 35 U.S.C. § 102(b). If the "viewing history" (col. 39, ll. 24-37) of Herz is employed to meet the "history" limitation of the claim, it is that same "viewing history" of Herz that must be modified to meet the limitation of "modifying a target user's history...." The viewing history and profile are not synonymous as the Examiner suggests, because then the limitation of "processing the modified target user's history to generate a target user profile" could not be met. Herz does not modify the viewing history, but instead modifies the user profile, a derivative of the history. In contrast, these claims require a modification to the history, and using that modified history to generate the modified profile. While this distinction would not appear to change the end result of the process, it is sufficient to distinguish the claimed invention from Herz under 35 U.S.C. § 102(b).

## CONCLUSION OF LAW REGARDING ISSUE 2

Appellant has established that the Examiner erred in rejecting claims 1, 3-6, 10, 14-17, and 21-23 under 35 U.S.C. § 102(b) as being anticipated by Herz. Appellant has not established that the Examiner erred in rejecting claims 7-9, 11-13, and 18-20 under 35 U.S.C. § 102(b) as being anticipated by Herz.

## DECISION

We enter a new ground of rejection of claims 1, and 3-13 under 35 U.S.C. § 101. The rejection of claims 7-9, 11-13, and 18-20 as being anticipated by Herz is affirmed. The rejection of claims 1, 3-6, 10, 14-17, and 21-23 as being anticipated by Herz is reversed.

## FINALITY OF DECISION

Regarding the affirmed rejection(s), 37 C.F.R. § 41.52(a)(1) provides “Appellant may file a single request for rehearing within two months from the date of the original decision of the Board.”

In addition to affirming the Examiner's rejections of one or more claims, this decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (2008). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)

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